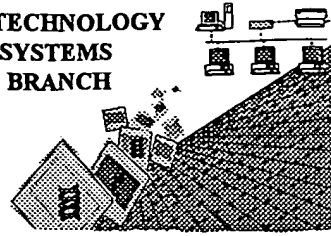


P. Bookes
9/200

1045

BIOTECHNOLOGY
SYSTEMS
BRANCH



RECEIVED

SEP 03 2002

TECH CENTER 1600/2900

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/623,568A
Source: 1600
Date Processed by STIC: 8/28/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/623,568A

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- | | | |
|----|--|---|
| 1 | <p><u>Wrapped Nucleics</u>
<u>Wrapped Aminos</u></p> | <p>The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."</p> |
| 2 | <p><u>Invalid Line Length</u></p> | <p>The rules require that a line not exceed 72 characters in length. This includes white spaces.</p> |
| 3 | <p><u>Misaligned Amino</u>
<u>Numbering</u></p> | <p>The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.</p> |
| 4 | <p><u>Non-ASCII</u></p> | <p>The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.</p> |
| 5 | <p><u>Variable Length</u></p> | <p>Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.</p> |
| 6 | <p><u>PatentIn 2.0</u>
<u>"bug"</u></p> | <p>A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.</p> |
| 7 | <p><u>Skipped Sequences</u>
<u>(OLD RULES)</u></p> | <p>Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped</p> <p>Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.</p> |
| 8 | <p><u>Skipped Sequences</u>
<u>(NEW RULES)</u></p> | <p>Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000</p> |
| 9 | <p><u>Use of n's or Xaa's</u>
<u>(NEW RULES)</u></p> | <p>Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.</p> |
| 10 | <p><u>Invalid <213></u>
<u>Response</u></p> | <p>Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence</p> |
| 11 | <p><u>Use of <220></u></p> | <p>Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)</p> |
| 12 | <p><u>PatentIn 2.0</u>
<u>"bug"</u></p> | <p>Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.</p> |
| 13 | <p><u>Misuse of n</u></p> | <p>n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.</p> |



RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/623,568A

DATE: 08/28/2002
TIME: 10:39:01

Input Set : A:\EP.txt
Output Set: N:\CRF4\08282002\I623568A.raw

*Does Not Comply
Corrected Diskette Needed
see pp 1-3, 6*

3 <110> APPLICANT: Miller, Barbara
4 Osmani, Stephen
5 Clawson, Gary
6 Zhang, Min-Ying
7 Norris, James
9 <120> TITLE OF INVENTION: Use of Human Homolog Of A Nuclear Migration Gene For
Treatment And
10 Diagnosis Of Cancer
12 <130> FILE REFERENCE: PSU-0016
14 <140> CURRENT APPLICATION NUMBER: 09/623,568A
15 <141> CURRENT FILING DATE: 2001-03-23
17 <150> PRIOR APPLICATION NUMBER: 60/076,885
18 <151> PRIOR FILING DATE: 1998-03-05
20 <150> PRIOR APPLICATION NUMBER: PCT US99/04996
21 <151> PRIOR FILING DATE: 1999-03-05
23 <160> NUMBER OF SEQ ID NOS: 16
25 <170> SOFTWARE: PatentIn version 3.1
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 14
29 <212> TYPE: PRT
30 <213> ORGANISM: artificial Sequence
32 <220> FEATURE:
33 <223> OTHER INFORMATION: Peptide *insufficient explanation - give source of genetic material*
35 <400> SEQUENCE: 1
37 Gly Cys Met Val Glu Lys Met Met Tyr Asp Gln Arg Gln Lys
38 1 5 10
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 15
43 <212> TYPE: PRT
44 <213> ORGANISM: artificial Sequence
46 <220> FEATURE:
47 <223> OTHER INFORMATION: Peptide *same*
49 <400> SEQUENCE: 2
51 Asn Gly Ser Leu Asp Ser Pro Gly Lys Gln Asp Thr Glu Glu Asp
52 1 5 10 15
55 <210> SEQ ID NO: 3
56 <211> LENGTH: 24
57 <212> TYPE: DNA
58 <213> ORGANISM: artificial Sequence
60 <220> FEATURE:
61 <223> OTHER INFORMATION: Oligonucleotide *same error as above*
63 <400> SEQUENCE: 3
64 ttctgttcgt ctgaagttgg cagc
67 <210> SEQ ID NO: 4

24

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/623,568A

DATE: 08/28/2002
 TIME: 10:39:01

Input Set : A:\EP.txt
 Output Set: N:\CRF4\08282002\I623568A.raw

68 <211> LENGTH: 24
 69 <212> TYPE: DNA
 70 <213> ORGANISM: artificial Sequence
 72 <220> FEATURE:
 73 <223> OTHER INFORMATION: Oligonucleotide
 75 <400> SEQUENCE: 4
 76 caatgaagtg aaggtggagg agag 24
 79 <210> SEQ ID NO: 5
 80 <211> LENGTH: 38
 81 <212> TYPE: DNA
 82 <213> ORGANISM: artificial Sequence
 84 <220> FEATURE:
 85 <223> OTHER INFORMATION: Oligonucleotide
 87 <400> SEQUENCE: 5
 88 aaggtaccaa gatggactcc ccaggggaagc aggatact 38
 91 <210> SEQ ID NO: 6
 92 <211> LENGTH: 32
 93 <212> TYPE: DNA
 94 <213> ORGANISM: artificial Sequence
 96 <220> FEATURE:
 97 <223> OTHER INFORMATION: Oligonucleotide
 99 <400> SEQUENCE: 6
 100 aaggatccaa gaaagttggg tggttgcagc tc 32
 103 <210> SEQ ID NO: 7
 104 <211> LENGTH: 20
 105 <212> TYPE: DNA
 106 <213> ORGANISM: artificial Sequence
 108 <220> FEATURE:
 109 <223> OTHER INFORMATION: Oligonucleotide
 111 <400> SEQUENCE: 7
 112 gaaagtcgga ggttcgaaga 20
 115 <210> SEQ ID NO: 8
 116 <211> LENGTH: 20
 117 <212> TYPE: DNA
 118 <213> ORGANISM: artificial Sequence
 120 <220> FEATURE:
 121 <223> OTHER INFORMATION: Oligonucleotide
 123 <400> SEQUENCE: 8
 124 accaactaag aacggccatg 20
 127 <210> SEQ ID NO: 9
 128 <211> LENGTH: 24
 129 <212> TYPE: DNA
 130 <213> ORGANISM: artificial Sequence
 132 <220> FEATURE:
 133 <223> OTHER INFORMATION: Oligonucleotide
 135 <400> SEQUENCE: 9
 136 agcaacatgc cgtcgaaccg ctcc 24
 139 <210> SEQ ID NO: 10
 140 <211> LENGTH: 24

RAW SEQUENCE LISTING

DATE: 08/28/2002

PATENT APPLICATION: US/09/623,568A

TIME: 10:39:01

Input Set : A:\EP.txt

Output Set: N:\CRF4\08282002\I623568A.raw

```

141 <212> TYPE: DNA
142 <213> ORGANISM: artificial Sequence
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Oligonucleotide
147 <400> SEQUENCE: 10
148 ggagcgggttc gacggcatgt tgct                               24
151 <210> SEQ ID NO: 11
152 <211> LENGTH: 1281
153 <212> TYPE: DNA
154 <213> ORGANISM: Homo sapiens
156 <400> SEQUENCE: 11
157 ctagagtgca gagctccggg acgtggatcg gagccggcgc gatgggcgga gagcaggagg      60
159 aggagcgggt cgacggcatg ttgctggcca tggctcagca gcacgagggc ggcgtgcagg      120
161 agcttgtgaa caccttcttc agcttccttc gacgcaaac agactttttc attggaggag      180
163 aagaagggat ggcagagaag cttatcacac agactttcag ccaccacaat cagctggcac      240
165 agaagaccg gcgggagaag agagcccggc aggaggccga gcggcgggag aaggcggagc      300
167 gggcggccag actggccaag gaagccaagt cagagacctc agggccccag atcaaggagc      360
169 taactgatga agaggcagag aggctgcagc tagagattga ccagaaaaag gatgcagaga      420
171 atcatgaggc ccagctcaag aacggcagcc ttgactcccc agggaagcag gatactgagg      480
173 aagatgagga ggaagatgag aaggacaaag gaaaactgaa gcccaacctt ggcaacgggg      540
175 cagacctgcc caattaccgc tggaccaga ccctgtcggg gctggacctg gcggtccctt      600
177 tctgtgtgaa cttccggctg aaagggagg acatggtggt ggacatccag cggcggcacc      660
179 tccgggtggg gctcaagggg cagccagcga tcattgatgg ggagctctac aatgaagtga      720
181 aggtggagga gagctcgtgg ctcatggagg acggcaaggt ggtgactgtg catctggaga      780
183 agatcaataa gatggagtgg tggagccgct tgggtgccag tgaccctgag atcaacacca      840
185 agaagattaa cctgagaat tccaagctgt cagacctgga cagtgagact cgcagcatgg      900
187 tggaaaagat gatgtatgac cagcgacaga agtccatggg gctgccaaact tcagacgaac      960
189 agaagaaaca ggagattctg aagaagttca tggatcaaca tccgggatg gatttttcca    1020
191 aggctaaatt caactagccc ctgttttttc ctccctgaac tcttggggct gagctgcaac    1080
193 cacccaactt tctttcccac tcttctctgg gacttgtggg cctcagggct tggggcaggc    1140
195 atgggactgg cccaggcaca caggccccgg ggcacagga gaaaggctgg gtcttgggac    1200
197 cttgtcctcc ccagttggcc tactgttaca cattaaaacg atttgcccag ctcaaaaaaa    1260
199 aaaaaaaaaa aaaaaaaaaa a
202 <210> SEQ ID NO: 12
203 <211> LENGTH: 331
204 <212> TYPE: PRT
205 <213> ORGANISM: Homo sapiens
207 <400> SEQUENCE: 12
209 Met Gly Gly Glu Gln Glu Glu Glu Arg Phe Asp Gly Met Leu Leu Ala
210 1 5 10 15
213 Met Ala Gln Gln His Glu Gly Gly Val Gln Glu Leu Val Asn Thr Phe
214 20 25 30
217 Phe Ser Phe Leu Arg Arg Lys Thr Asp Phe Phe Ile Gly Gly Glu Glu
218 35 40 45
221 Gly Met Ala Glu Lys Leu Ile Thr Gln Thr Phe Ser His His Asn Gln
222 50 55 60
225 Leu Ala Gln Lys Thr Arg Arg Glu Lys Arg Ala Arg Gln Glu Ala Glu
226 65 70 75 80
229 Arg Arg Glu Lys Ala Glu Arg Ala Ala Arg Leu Ala Lys Glu Ala Lys

```

RAW SEQUENCE LISTING

DATE: 08/28/2002

PATENT APPLICATION: US/09/623,568A

TIME: 10:39:01

Input Set : A:\EP.txt

Output Set: N:\CRF4\08282002\I623568A.raw

```

230          85          90          95
233 Ser Glu Thr Ser Gly Pro Gln Ile Lys Glu Leu Thr Asp Glu Glu Ala
234          100          105          110
237 Glu Arg Leu Gln Leu Glu Ile Asp Gln Lys Lys Asp Ala Glu Asn His
238          115          120          125
241 Glu Ala Gln Leu Lys Asn Gly Ser Leu Asp Ser Pro Gly Lys Gln Asp
242          130          135          140
245 Thr Glu Glu Asp Glu Glu Asp Glu Lys Asp Lys Gly Lys Leu Lys
246 145          150          155          160
249 Pro Asn Leu Gly Asn Gly Ala Asp Leu Pro Asn Tyr Arg Trp Thr Gln
250          165          170          175
253 Thr Leu Ser Glu Leu Asp Leu Ala Val Pro Phe Cys Val Asn Phe Arg
254          180          185          190
257 Leu Lys Gly Lys Asp Met Val Val Asp Ile Gln Arg Arg His Leu Arg
258          195          200          205
261 Val Gly Leu Lys Gly Gln Pro Ala Ile Ile Asp Gly Glu Leu Tyr Asn
262          210          215          220
265 Glu Val Lys Val Glu Glu Ser Ser Trp Leu Ile Glu Asp Gly Lys Val
266 225          230          235          240
269 Val Thr Val His Leu Glu Lys Ile Asn Lys Met Glu Trp Trp Ser Arg
270          245          250          255
273 Leu Val Ser Ser Asp Pro Glu Ile Asn Thr Lys Lys Ile Asn Pro Glu
274          260          265          270
277 Asn Ser Lys Leu Ser Asp Leu Asp Ser Glu Thr Arg Ser Met Val Glu
278          275          280          285
281 Lys Met Met Tyr Asp Gln Arg Gln Lys Ser Met Gly Leu Pro Thr Ser
282          290          295          300
285 Asp Glu Gln Lys Lys Gln Glu Ile Leu Lys Lys Phe Met Asp Gln His
286 305          310          315          320
289 Pro Glu Met Asp Phe Ser Lys Ala Lys Phe Asn
290          325          330
293 <210> SEQ ID NO: 13
294 <211> LENGTH: 332
295 <212> TYPE: PRT
296 <213> ORGANISM: Rattus rattus
298 <400> SEQUENCE: 13
300 Met Gly Gly Glu Gln Glu Glu Glu Arg Phe Asp Gly Met Leu Leu Ala
301 1          5          10          15
304 Met Ala Gln Gln His Glu Gly Gly Val Gln Glu Leu Val Asn Thr Phe
305          20          25          30
308 Phe Ser Phe Leu Arg Arg Lys Thr Asp Phe Phe Ile Gly Gly Glu Glu
309          35          40          45
312 Gly Met Ala Glu Lys Leu Ile Thr Gln Thr Phe Asn His His Asn Gln
313          50          55          60
316 Leu Ala Gln Lys Ala Arg Arg Glu Lys Arg Ala Arg Gln Glu Thr Glu
317 65          70          75          80
320 Arg Arg Glu Lys Ala Glu Arg Ala Ala Arg Leu Ala Lys Glu Ala Lys
321          85          90          95
324 Ala Glu Thr Pro Gly Pro Gln Ile Lys Glu Leu Thr Asp Glu Glu Ala

```

RAW SEQUENCE LISTING

DATE: 08/28/2002

PATENT APPLICATION: US/09/623,568A

TIME: 10:39:01

Input Set : A:\EP.txt

Output Set: N:\CRF4\08282002\I623568A.raw

```

325          100          105          110
328 Glu Arg Leu Gln Leu Glu Ile Asp Gln Lys Lys Asp Ala Glu Asn His
329          115          120          125
332 Glu Val Gln Leu Lys Asn Gly Ser Leu Asp Ser Pro Gly Lys Gln Asp
333          130          135          140
336 Ala Glu Glu Glu Glu Asp Glu Glu Asp Glu Lys Asp Lys Gly Lys Leu
337 145          150          155          160
340 Lys Pro Asn Leu Gly Asn Gly Ala Asp Leu Pro Asn Tyr Arg Trp Thr
341          165          170          175
344 Gln Thr Leu Ser Glu Leu Asp Leu Ala Val Pro Phe Arg Val Ser Phe
345          180          185          190
348 Arg Leu Lys Gly Lys Asp Val Val Val Asp Ile Gln Arg Arg His Leu
349          195          200          205
352 Arg Val Gly Leu Lys Gly Gln Ala Pro Val Ile Asp Gly Glu Leu Tyr
353          210          215          220
356 Asn Glu Val Lys Val Glu Glu Ser Ser Trp Leu Ile Glu Asp Gly Lys
357 225          230          235          240
360 Val Val Thr Val His Leu Glu Lys Ile Asn Lys Met Glu Trp Trp Asn
361          245          250          255
364 Arg Leu Val Thr Ser Asp Pro Glu Ile Asn Thr Lys Lys Ile Asn Pro
365          260          265          270
368 Glu Asn Ser Lys Leu Ser Asp Leu Asp Ser Glu Thr Arg Ser Met Val
369          275          280          285
372 Glu Lys Met Met Tyr Asp Gln Arg Gln Lys Ser Met Gly Leu Pro Thr
373          290          295          300
376 Ser Asp Glu Gln Lys Lys Gln Glu Ile Leu Lys Lys Phe Met Asp Gln
377 305          310          315          320
380 His Pro Glu Met Asp Phe Ser Lys Ala Lys Phe Asn
381          325          330
384 <210> SEQ ID NO: 14
385 <211> LENGTH: 198
386 <212> TYPE: PRT
387 <213> ORGANISM: Aspergillus nidulans
389 <400> SEQUENCE: 14
391 Met Ser Glu Gln Glu Pro Ser Ser Ala Asp Leu Ala Ala Arg Glu Ala
392 1          5          10          15
395 Glu Glu Lys Gln Arg Lys Ala Ala Glu Glu Ala Glu Gln Ala Thr Leu
396          20          25          30
399 Pro Tyr Lys Trp Thr Gln Thr Ile Arg Asp Val Asp Val Thr Ile Pro
400          35          40          45
403 Val Ser Ala Asn Leu Lys Gly Arg Asp Leu Asp Val Val Leu Lys Lys
404          50          55          60
407 Asp Ser Ile Lys Val Lys Val Lys Gly Glu Asn Gly Glu Val Phe Ile
408 65          70          75          80
411 Asp Gly Gln Phe Pro His Pro Ile Lys Pro Ser Glu Ser Ser Trp Thr
412          85          90          95
415 Leu Glu Thr Thr Ser Lys Pro Pro Gly Lys Glu Val Ser Ile His Leu
416          100          105          110
419 Asp Lys Val Asn Gln Met Glu Trp Trp Ala His Val Val Thr Thr Ala

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/28/2002
PATENT APPLICATION: US/09/623,568A TIME: 10:39:02

Input Set : A:\EP.txt
Output Set: N:\CRF4\08282002\I623568A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:16; Xaa Pos. 9,11

VERIFICATION SUMMARY

DATE: 08/28/2002

PATENT APPLICATION: US/09/623,568A

TIME: 10:39:02

Input Set : A:\EP.txt

Output Set: N:\CRF4\08282002\I623568A.raw

L:496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0